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ON THE GENUS *EUPLOCANIA* ENDERLEIN (PSOCOPTERA: PTILONEURIDAE) WITH DESCRIPTION OF A NEW SPECIES

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Abstract.—The female of *Euplocania cerata* New, and both sexes of ***E. pictaoides*, n. sp.**, are described and illustrated. *Euplocania chulumanensis* Williner is transferred to *Triplocania* (**n. comb.**). New records of *E. badonneli* New and Thornton are provided, as well as a list with distributions and key to the known species of *Euplocania*.

Key Words: *Euplocania*, Ptiloneuridae, new species, Perú, Río Tambopata Reserve

The ptiloneurid genera *Euplocania* Enderlein 1910, and *Triplocania* Roesler 1940, are structurally close, the genital plan of both sexes in both genera being rather similar. As presently known, the two genera differ in wing venation characters only, *Euplocania* having the fore wing M four branched, and *Triplocania* having the fore wing M three branched.

The known species of *Euplocania* are exclusively South American, having been recorded in Brazil, Paraguay, and Amazonian Peru (Table 1). In this paper, I describe a new *Euplocania* from Peru, transfer the Bolivian *E. chulumanensis* to *Triplocania*, describe the female of *E. cerata* New, provide new records of *E. badonneli* New and Thornton, and provide a list of the known species of *Euplocania*. The types of the new species will be deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C. (USNM). The standard measurements (FW = fore wing, HW = hind wing, F = femur, T = tibia, IO = minimum distance between compound eyes, D = antero-posterior diameter of compound eye, d = transverse diameter of compound eye, and PO = d/D), are given in microns and were taken on the parts mounted on slides under the compound microscope, with a filar micrometer whose measuring unit is 1.36 microns for wings and 0.53 microns for other parts. The scales of the illustrations are in mm.

Euplocania Enderlein 1910

Type species: *Euplocania amabilis* Enderlein 1910: 69, by original designation

Euplocania badonneli New and Thornton

This species was described from the Río Tambopata Reserved Zone, in Madre de Dios, Peru (New and Thornton 1988). The following are new records: Brazil. Rondônia, 62 km SW Ariquemes, Fzada. Rancho Grande, 12.X.1992, C.W. & L. B. O'Brien, 1 ♀, 1 ♂. 15. XI.1994, UV & mercury vapor light, 1 ♀. 17.XI.1994, UV & mercury vapor light, 1 ♀, same collectors. *Euplocania badonneli* belongs in a group that includes *E. picta* New, and *E. pictaoides*, n. sp. (see below), sharing with them the color pattern of the fore wing, the shape of the pterostigma and of the areola postica, and the structural plan of the male and female genitalia: central piece of the hypandrium bilobed and flanked by sclerites, phallosomes complex and symmetrical, pigment-

Table 1. Species of *Euplocania* and distribution.

E. amabilis Enderlein 1910: 69	Paraguay
E. badonneli New and Thornton 1988: 230	Brazil, Peru
E. cerata New 1980: 189	Brazil, Peru
E. greeni New 1972: 489	Brazil
E. maculata New and Thornton 1988: 229	Peru
E. marginata New and Thornton 1988: 226	Peru
E. picta New 1980: 189	Brazil
E. pictaoides Garcia Aldrete	Peru

ed areas of the subgenital plate connected posteriorly by a well defined, slender arch, male paraprocts triangular, with two apical macrosetae, and male epiproct triangular, with marginal setae and five mesal, scattered setae.

Euplocania cerata New
(Figs. 1–6)

This species was described from the Reserva Ducke, Amazonas, Brazil, from two males, the holotype and paratype (New 1980). A female collected in Peru is described here.

Female.—*Color (in 80% alcohol):* Essentially as described for the male.

Morphology: Wings (Fig. 1) same as described for the male. Lacinial apex broad (Fig. 2), inner tyne small, and large, multidenticulate outer lobe. Subgenital plate (Fig. 4), approximately triangular, with pigmented area deeply concave and three marginal apical setae. Ovipositor valvulae (Fig. 6): v1 slender, about half as long as v2; v2 spindle shaped, with elongate, slender, anterior "handle", posterior process stout, almost straight, distally spiculate; v3 a well defined lobe on the outer edge of v2, bearing four setae. Ninth sternum (Fig. 6), large, almost rectangular, with striae as illustrated. Paraprocts (Fig. 5) triangular, with setae as illustrated; each with three stout, apical macrosetae; sensory fields with 16–17 trichobothria on basal rosettes. Epiproct (Fig. 5) triangular, with field of setae on posterior half and three stout, apical macrosetae.

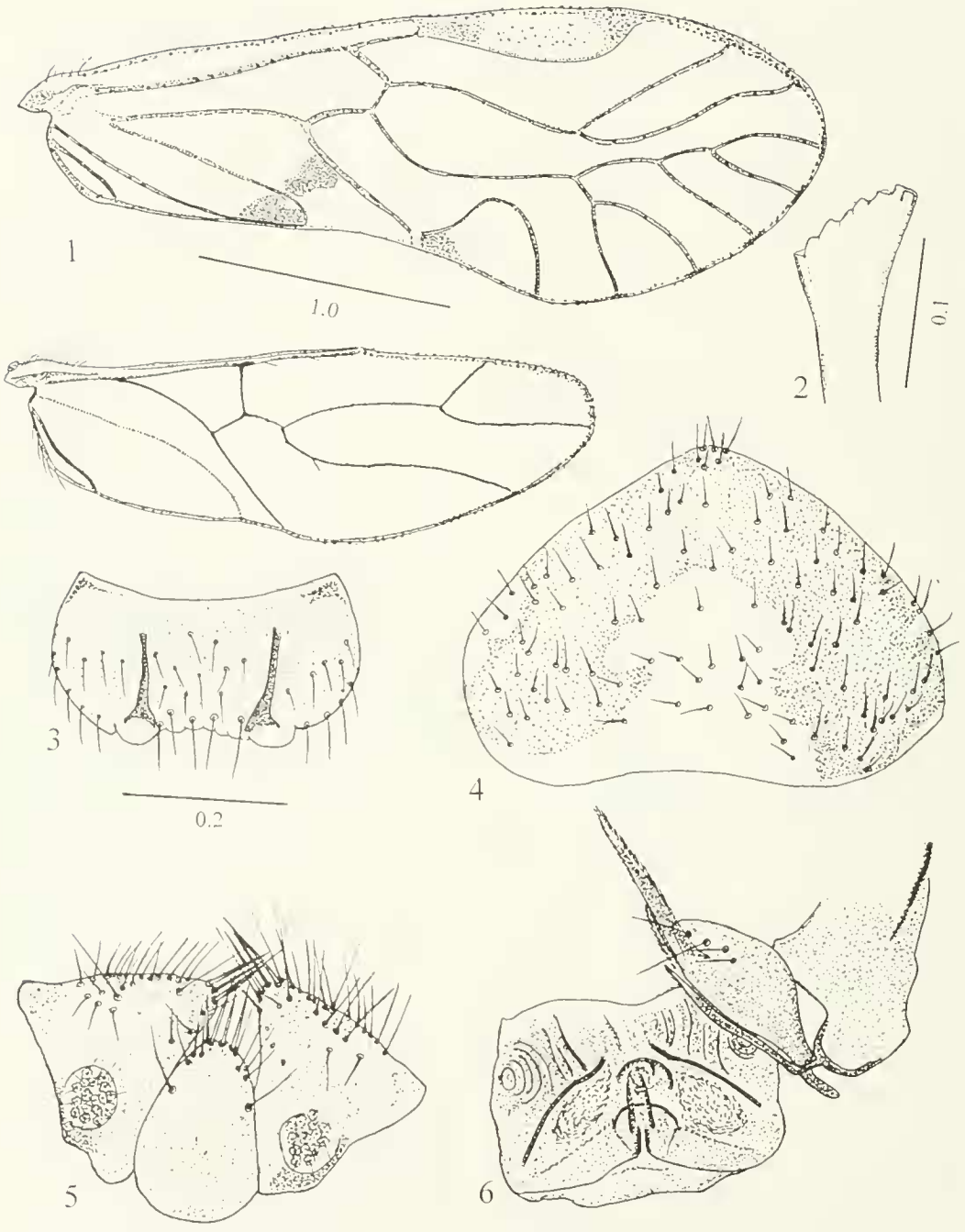
Measurements: FW: 3118, HW: 2178, F: 757, IO:359, D: 330, d: 230, IO/d: 1.08, PO: 0.69.

Locality.—Peru. Madre de Dios, Río Tambopata Reserve, 30 km (air) SW Puerto Maldonado, 12°50′S, 69°20′W. Smithsonian Institution Canopy Fogging Project, T. L. Erwin et al., 14.IX.1984, 01/02/045, 1 ♀, allotype. (USNM).

Comments.—This species is close to *E. maculata* New and Thornton, described from a single female collected also at the locality above indicated. They differ in that both sexes of *E. cerata* lack the radial spots present on the fore wing cells R_5–M_3 of *E. maculata*. That species also shows seven long apical setae on the subgenital plate (three short setae in *E. cerata*); in *E. maculata* the proximal projection of v2 is acuminate and the posterior process is sinuous, thus contrasting with *E. cerata*.

Euplocania chulumanensis Williner

This species was described from Chulumani, south of Yungas, Bolivia. In the original description (Williner 1949) the fore and hind wings were illustrated (Fig. 5, p. 106), the fore wing M_1 being forked near the wing margin; since in all the known species of *Euplocania* and *Triplocania* M_1 and M_2 are about the same length, then the fore wing M is three-branched, although anomalous in having M_1 distally forked, and on that basis I am transfering the species to *Triplocania*, **new combination.**



Figs. 1–6. *Euplocania cerata*, female. 1, Fore and hind wings. 2, Apex of lacinia. 3, Labrum. 4, Subgenital plate. 5, Paraprocts and epiproct. 6, Ninth sternum and left ovipositor valvulae. Scales in mm. Figs. 4–6 to scale of Fig. 3.

Euplocania pictaoides García Aldrete, new species
(Figs. 7–16)

Female.—*Color (in 80% alcohol):* Pale brown, with ochre irregular spots on head (Fig. 7), outer faces of coxae near thoracic pleura, on thoracic pleura and on abdomen. Compound eyes black, ocelli hyaline, each with an ochre centripetal crescent. Maxillary palp pale brown, with Mx4 dark brown. Scape and pedicel dark brown, flagellomeres whitish, with setae ochre, strongly contrasting. Tergal lobes of meso- and metathorax dark brown. Femora and tibiae brown, t_1 brown with ochre apex, t_2 and t_3 dark brown. Fore wing pattern (Fig. 9) as illustrated, pterostigma and marginal band dark brown; dark, triangular spots on distal ends of veins R_{2+3}, R_{4+5}, M_1–M_4, and Cu1a, Hind wing (Fig. 9) hyaline, with a brown band on basal hind margin, and dark spots on ends of R_{4+5}, and M.

Morphology: Lacinial apex (Fig. 8) wide, with small inner tyne and large, multidenticulate outer lobe. Fore wing pterostigma (Fig. 9), basally narrow, wide posteriorly, R_{2+3} and R_{4+5} sinuous, M_1 almost straight and M_2–M_4 sinuous. Areola postica tall, wide based. Hind wing M forming a straight angle with Rs (Fig. 9). Subgenital plate (Fig. 12) broad, setose, narrowing posteriorly to a round apex, with seven marginal setae; lateral pigmented areas connected posteriorly by a slender, pigmented arch. Ovipositor valvulae (Fig. 13): v1 short, slender, v2+3 narrow anteriorly, with five mesal setae as illustrated, posterior process acuminate. Ninth sternum (Fig. 13) broad, coarsely textured. Paraprocts (Fig. 11) elongate, semi-elliptic, sensory fields with 22–23 trichobothria on basal rosettes. Epiproct (Fig. 11) straight anteriorly, rounded posteriorly, with a field of setae next posterior margin.

Measurements: FW, 4379, HW: 2501, F: 1061, T: 1741, t1: 737, t2: 79, t3: 116, ctt1: 22, Mx4: 134, IO: 552, D: 413, d: 240, IO/D: 1.33, PO: 0.58.

Male.—*Color (in 80% alcohol):* Same as female. Fore wing pterostigma with clear area on lower apex (Fig. 10).

Morphology: Hypandrium (Fig. 14), a central body flanked by triangular sclerites; central body setose, deeply cleft in the middle, each half ending in a round, heavily sclerotized spiny apex, with an acuminate projection directed inward. Phallosome (Fig. 16), a broad, central, complex, symmetrical piece as illustrated, and two slender, basal apodemes. Paraprocts (Fig. 15) slender, elongate, triangular, with setae as illustrated, including two stout, apical macrosetae, sensory fields small, each with 15–16 trichobothria issuing from basal rosettes. Epiproct (Fig. 15) slender, triangular, with narrow apex, marginal setae and a mesal field of five setae, as illustrated.

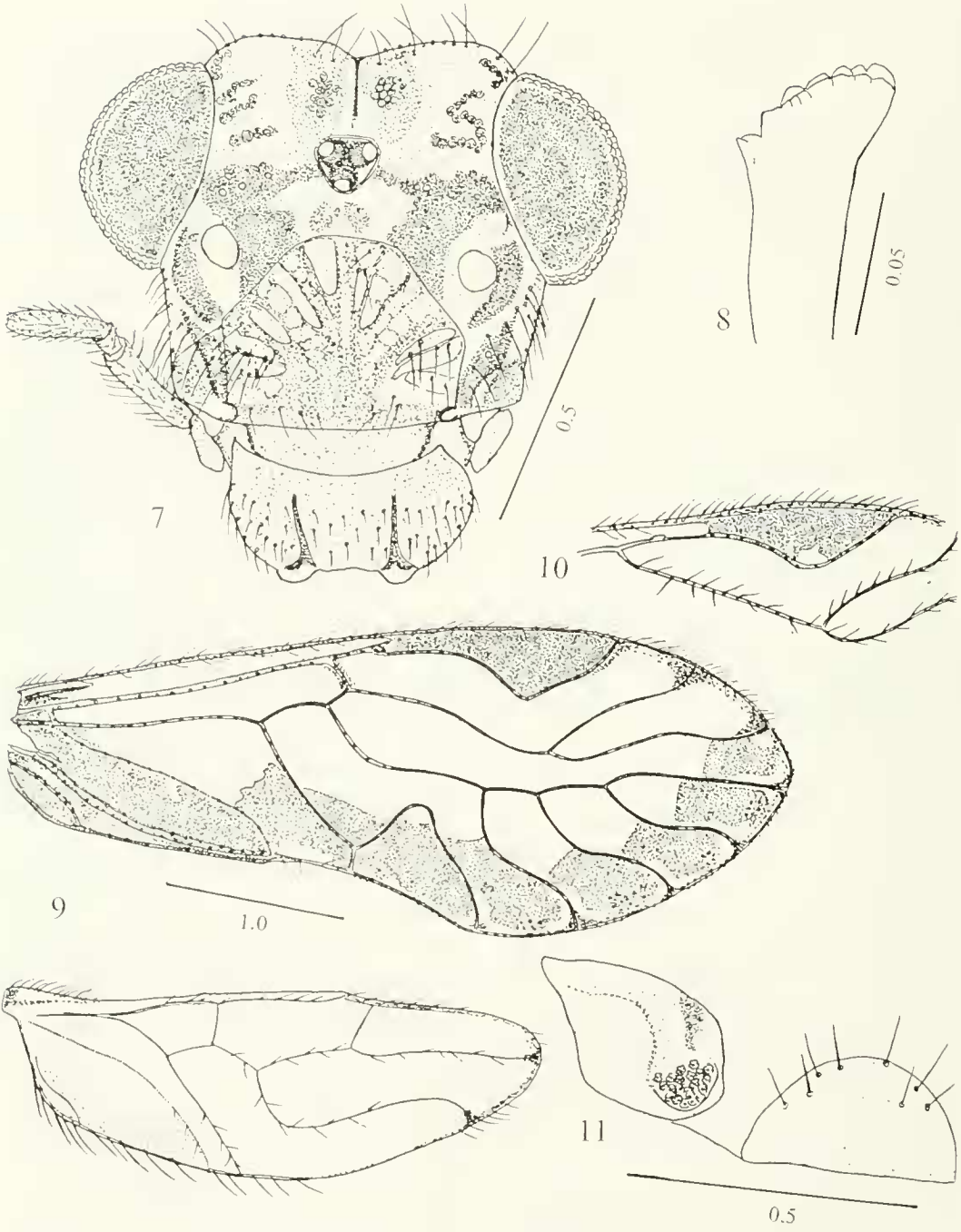
Measurements: FW: 3697, HW: 3017, F: 1101, T: 1807, IO: 534, D: 452, d. 302, IO/D: 1.18, PO: 0.66.

Types.—Peru. Madre de Dios. Río Tambopata Reserved Zone, 30 km (air) SW Puerto Maldonado, 290 m. Smithsonian Institution Canopy Fogging Project, T. L. Erwin et al. Holotype ♂, 8.XI.1983, 04/01/03. Allotype ♀, 7XI.1983, 01/02/072.

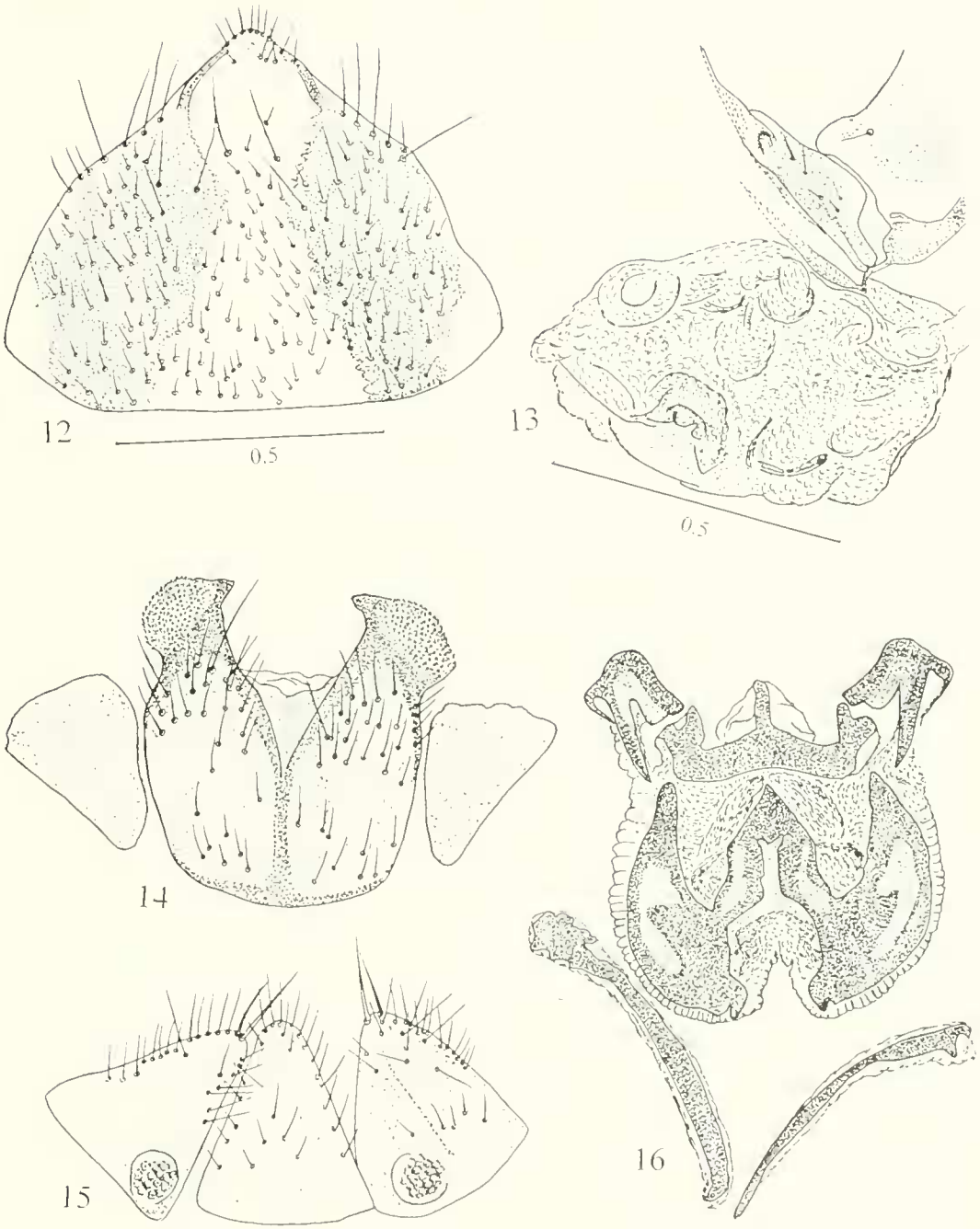
Comments.—This species is very close to *E. picta* New (1980), also described from the Amazonian region, from the Reserva Ducke, near Manaus (03°08′S, 60°02′W), taken in Malaise traps. Both species differ in genital details: the central piece of the hypandrium is more deeply cleft in *E. picta;* the apices of the halves are less spiny and the inner projection is more acuminate in this species. In general, the hypandrium presents the same structural plan in both species, with minor differences between them, but the phallosomes are quite distinct in both (compare Fig. 16 in this paper with Fig. 17 in New 1980, p. 184).

Key to the Species of *Euplocania*

1. Fore wings entirely hyaline (Paraguay) . . . . . *E. amabilis* Enderlein
– Fore wing marked with brown spots or with a brown band along wing margin 2



Figs. 7–11. *Euplocania pictaoides*. 7, Front view of head, female. 8, Apex of lacinia, female. 9, Fore and hind wings, female. 10, Fore wing pterostigma, male. 11, Epiproct and right paraproct, female. Scales in mm. Fig. 10 to scale of Fig. 9.



Figs. 12–16. *Euplocania pictaoides*. 12, Subgenital plate, female. 13, Ninth sternum and left ovipositor valvulae, female. 14, Hypandrium, male. 15, Epiproct and paraprocts, male. 16, Phallosome, male. Scales in mm. Figs. 14–16 to scale of Fig. 13.

2. Fore wing mostly hyaline, with brown spots on membrane 3
– Fore wing with well defined, broad, brown band, along wing margin, posterior to pterostigma 5
3. Fore wing pterostigma spurred, anal region with cross veins, light brown patches distally on cells R_{2+3} to M_4 (Brazil) . . . . . *E. greeni* New
– Fore wing pterostigma not spurred, anal region without crossveins, brown spots in proximal half of wing, near lower margin, with or without radial spots in cells R_{4+5} to M_3 4
4. Fore wing with a brown spot on anterior end of areola postica, one spot between Cu_1 and Cu_2 and a spot in confluence of Cu_2 and 1A (Brazil, Peru) . . . . . *E. cerata* New
– Fore wing with a radial series of small brown spots in cells R_{4+5} to M_3, in addition to the spots above indicated for *E. cerata* (Peru) . . . . . *E. maculata* New and Thornton
5. A V-shaped, irregularly pigmented area, between vertex and ocellar group, and a slender, irregular pigmented band between ocellar group and postclypeus. Fore wing with almost homogeneous pale brown band along margin, upper border straight, from R_{4+5} to cell Cu_2 (Peru) . . . . . *E. marginata* New and Thornton
– Upper border of pigmented band of fore wing sinuous; well defined slender, distal fenestrae, on apices of veins R_{4+5} to Cu1A. Head pattern not as above in two species (head missing in a third species) 6
6. Male epiproct with field of short spines near anterior border (Brazil, Peru) . . . . . *E. badonneli* New and Thornton
– Male epiproct without field of short spines near anterior margin 7
7. Male epiproct and paraprocts slender, elongate, triangular; paraprocts with two apical macrosetae (Peru) . . . . . *E. pictaoides* García Aldrete
– Male epiproct and paraprocts not as above; paraprocts without apical macrosetae (Brazil) . . . . . *E. picta* New

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